



UNIVERSITÉ
DE GENÈVE

FACULTY OF PSYCHOLOGY
AND EDUCATIONAL SCIENCES
Educational Sciences Section

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The importance of emotions in peer feedback

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ÉVALUER, RÉGULER
ET DIFFÉRENCIER

POUR APPRENDRE

ERED

Assessment and emotions

- The study of emotions originated in the field of psychology and progressively became an important research topic in education (Pharand & Doucet, 2013).
- Since the 2000s, extensive study of the role of emotions in learning processes.
- Further research needed in the field of educational assessment.
- Assessment creates strong emotions in any educational context : stress, anxiety, anger, frustration, recognition, pride, satisfaction, etc.
- Focus on the emotions of assessees (e.g., students) more than on the emotions of assessors (e.g., teachers).
- Focus on emotions in the context of teacher feedback more than peer feedback.

Feedback and emotions

Emotions of assessees during feedback processes

Informational and affective feedback components (e.g., Walzlawick et al., 1967)

- To be efficient, feedback should be informational, specific, linked to precise objectives.
- Affective feedback, especially about the person, is not efficient, and can even hurt learning (e.g., Cabastrero et al., 2018; Hattie & Timperley, 2007)
- The affective component of feedback is mostly studied through the concept of “praise” (e.g., Voerman et al., 2014) → controversial
- Affective feedback can also be manifested through the word choices of the assessor (Molloy et al., 2013)

Feedback and emotions

Emotions of assessees during feedback processes

Feedback valence and congruence between feedback and perceptions of own performance

| | Receive positive feedback | Receive negative feedback |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Expect positive feedback | <p>Happiness, confirmation of self perception (Sargeant et al., 2008, p. 279)</p> <p>Shame in the case of cheating → undeserved feedback (Fong et al., 2018, p. 249)</p> | <p>Anger if responsibility placed with the lecturer or tutor (Rowe et al., 2014, p. 294)</p> <p>Sadness if responsibility placed with learner (Rowe et al., 2014, p. 300)</p> <p>Negative surprise, disappointment, distress, sadness, anger, pain (Sargeant et al., 2008, p. 280)</p> <p>Sadness, Anger, Shame (Ryan & Henderson, 2018, table 6)</p> <p>Motivation to prove the assessor wrong (Fong et al., 2018, p. 248)</p> |
| Expect negative feedback | <p>Relief (Rowe et al., 2018, p. 300)</p> <p>Pleasant surprise (Sargeant et al., 2008, p. 279)</p> <p>Anger if positive feedback without suggestions, or if disagreement with positive feedback (Fong et al., 2018, p. 247)</p> <p>Despair if feedback seen as undeserved (Fong et al., 2018, p. 248)</p> | <p>Guilt and embarrassment (towards oneself) (Rowe et al., 2014, p. 297)</p> <p>Anger (towards oneself) if effort was put in (Rowe et al., 2014, p. 295)</p> <p>Happiness if feedback better than expected (Fong et al., 2018, p. 247)</p> <p>Pleasure to agree with negative feedback (good self-assessment skills) (Fong et al., 2018, p. 247)</p> <p>Will to use feedback to learn/improve, confirmation, acceptance of feedback (Sargeant et al., 2008, p. 279)</p> |

Feedback and emotions

Emotions of assessors during feedback processes

- Anxiety to hurt student's feelings with critical feedback (Molloy et al., 2013).
- Anxiety if not feeling competent enough (Molloy et al., 2013).

PEER FEEDBACK

- Feeling threatened by one's own lack of expertise (Sever, 2015).
- Feelings of uncertainty, insecurity, lack of reliability linked to novice assessors (Hanrahan & Isaacs, 2001).
- Feelings of ownership (Topping, 1998).
- Increased sense of responsibility (Rowe, 2017; Topping, 1998).

Continuous Assessment for Learning (ECPA)

Mottier Lopez & Girardet

- Assessment is highly **integrated in learning and instruction**.
- Assessment **relies on varied methods, tools, temporalities, spaces**.
- **Students share responsibility for assessment**, through self-assessment and peer assessment practices.
- Assessment **promotes reflexive attitudes**.
- Assessment not only intends to reflect student's cognitive performances but **also metacognitive, social and affective learning outcomes**.
- Assessment helps develop **students' assessment literacy** for students to become assessors of their own learning.

→ **Equip students to learn for the longer-term**

Context of our studies on peer feedback and emotions

Continuous Assessment for Learning (ECPA)

Mottier Lopez & Girardet

Some inspirational concepts and their origins

| | | |
|--------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assessment for Learning | Assessment Reform Group Black & Wiliam (1998) | Includes all forms of assessment that can encourage students to engage in learning for the purpose of regulation and self-regulation; strongly integrated with teaching and learning activities |
| Authentic assessment | Wiggins (1998) | The contents, structure, characteristics, and validity of assessments are associated with complex situations of the "real" world |
| Sustainable assessment | Boud (2000) | Assessment that meets students' present needs and also prepares them to meet their future learning needs |
| Assessment as learning | Earl (2003) | Assessment is seen as likely to represent learning opportunities. Assessment becomes a learning objective |

Context of our st

Continuously inspired by the work of diverse authors...

Continuous A
Mottier Lopez &

Some inspiration

| | |
|--------------------------------|-------------|
| Assessment for Learning | Ass Blac |
| Authentic assessment | Wig |
| Sustainable assessment | Bou |
| Assessment as learning | Ear |



...and many others!

It can encourage
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University of Geneva - Faculty of education

Example from a large course on educational assessment

"Assessment and regulation of learning in teaching and training systems"

- 1 semester, once a week, 1h30 course - 3 Credits ECTS ~**70 students**

And then...

- 1 academic year, once a week, 1h30 course - 6 Credits ECTS ~**150 students**

Students destine themselves to teaching primary school, and other education-related professions

Lucie Mottier Lopez (professor)

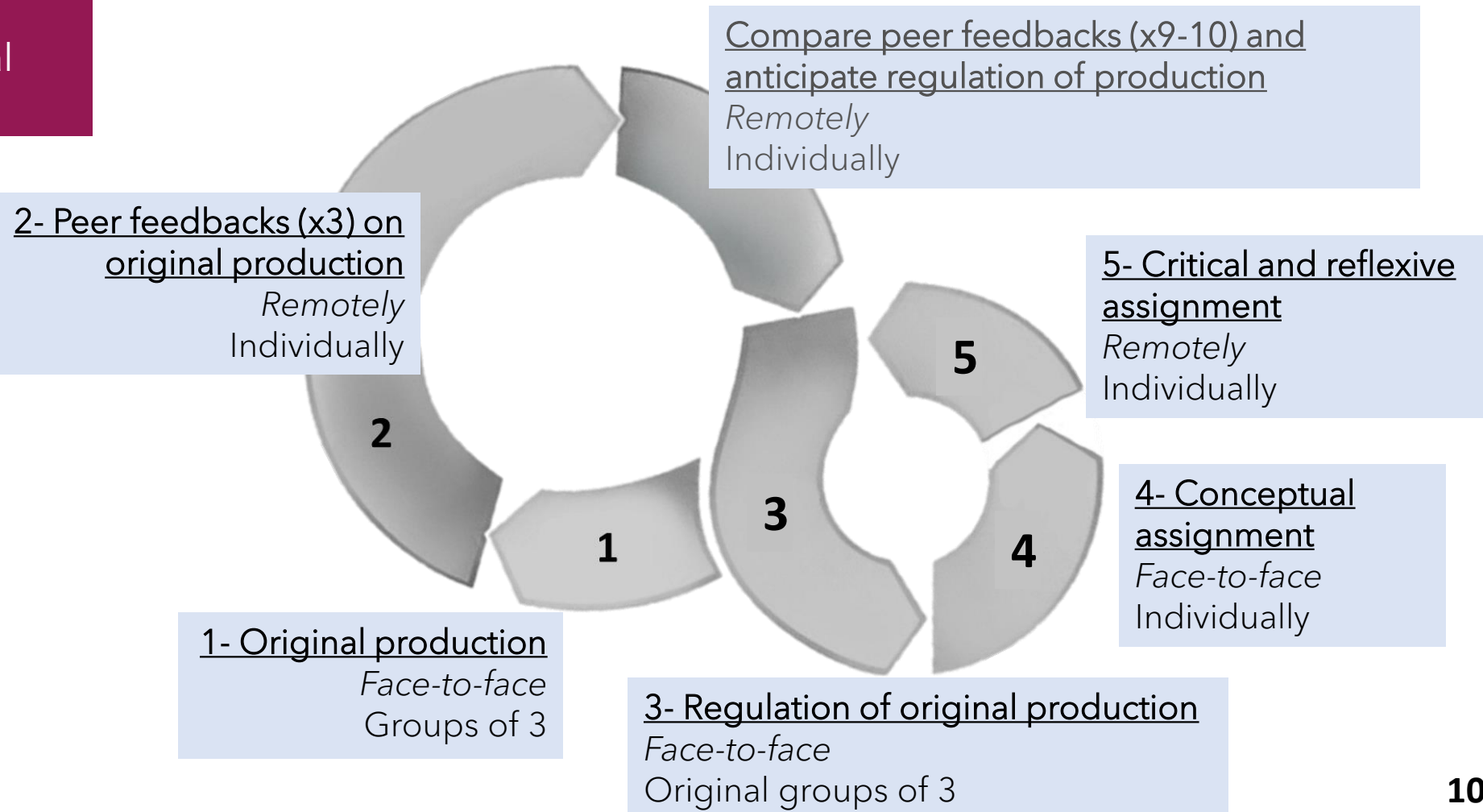
Céline Girardet (assistant professor)

Context of our studies on peer feedback and emotions

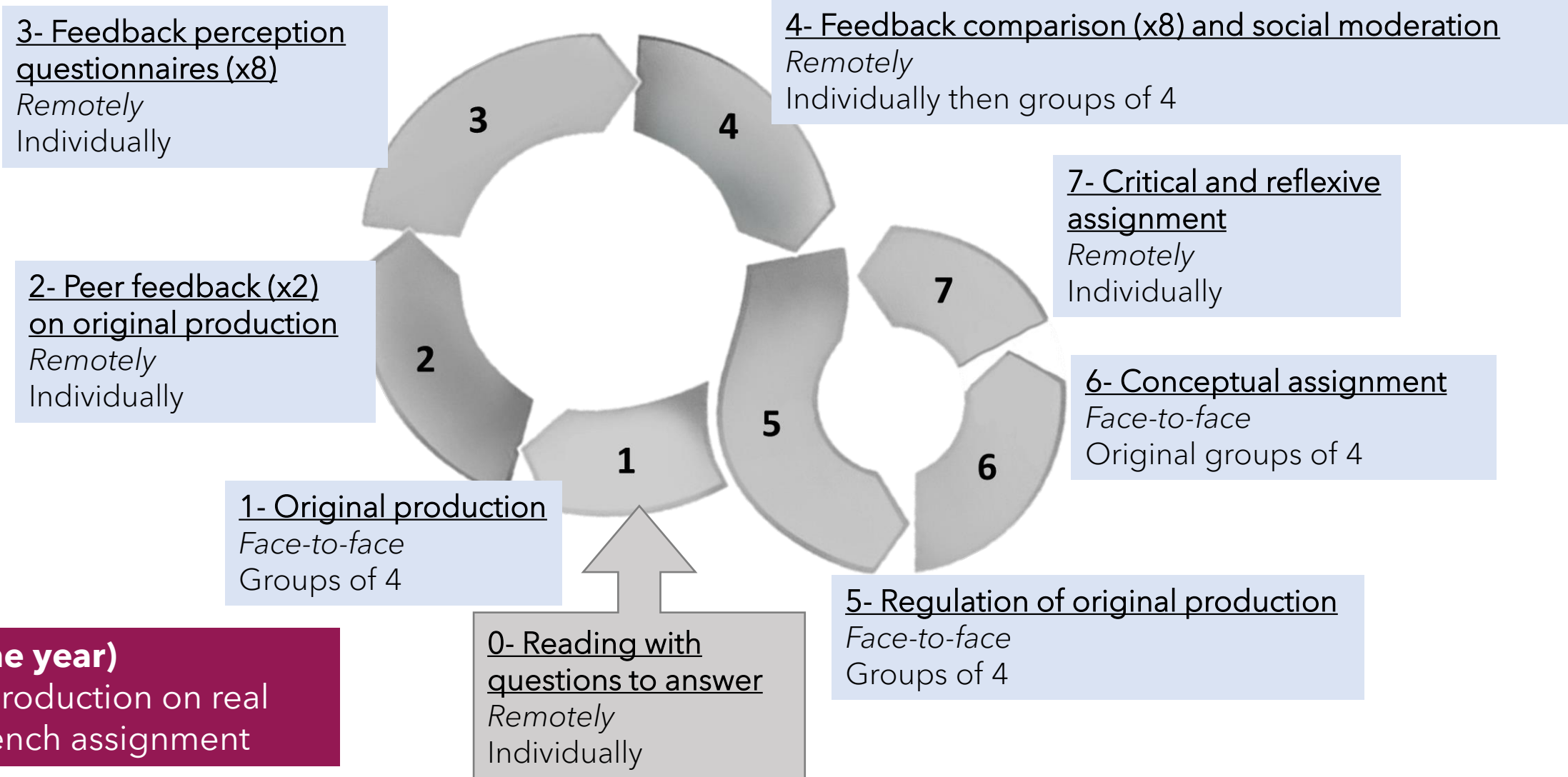
Continuous Assessment for Learning (ECPA)

2018 (one semester)

Original production on real pupils' Maths assignment

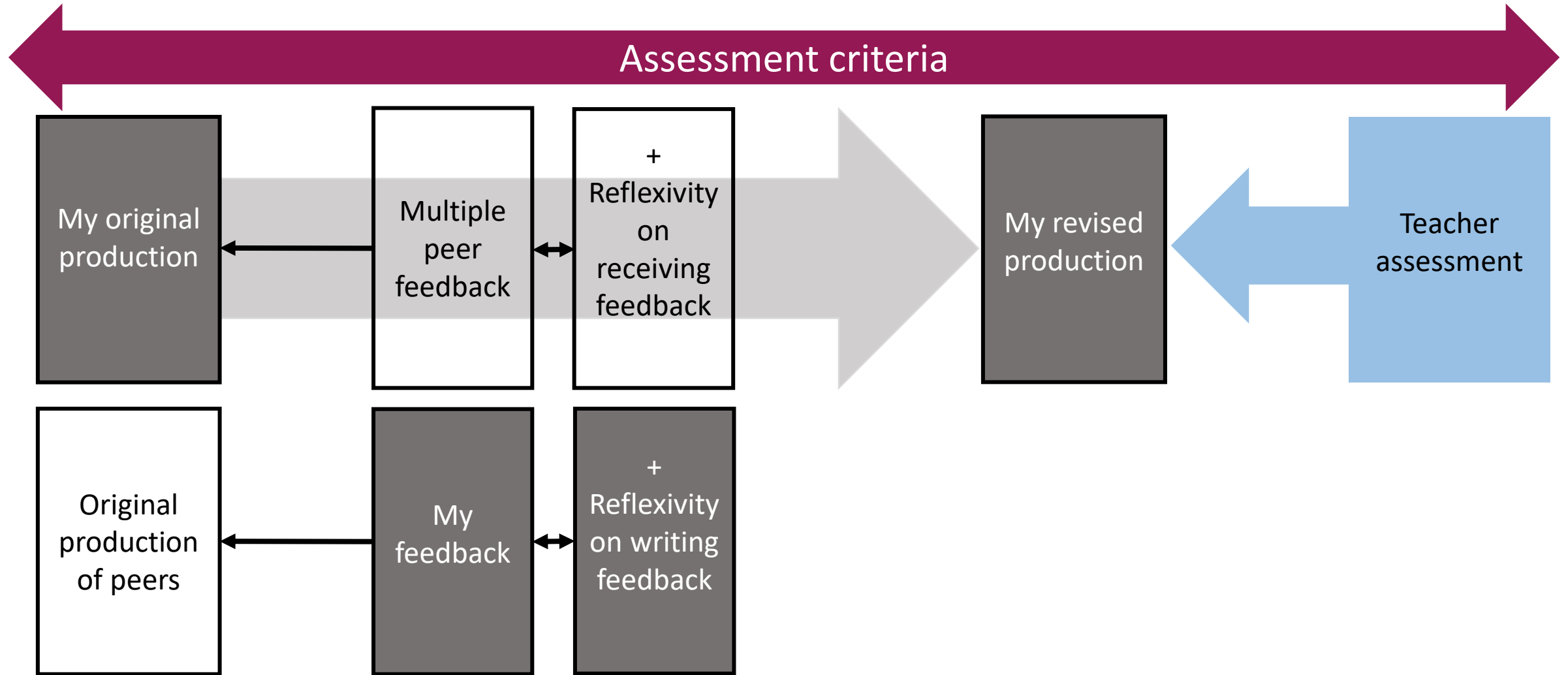


Continuous Assessment for Learning (ECPA)

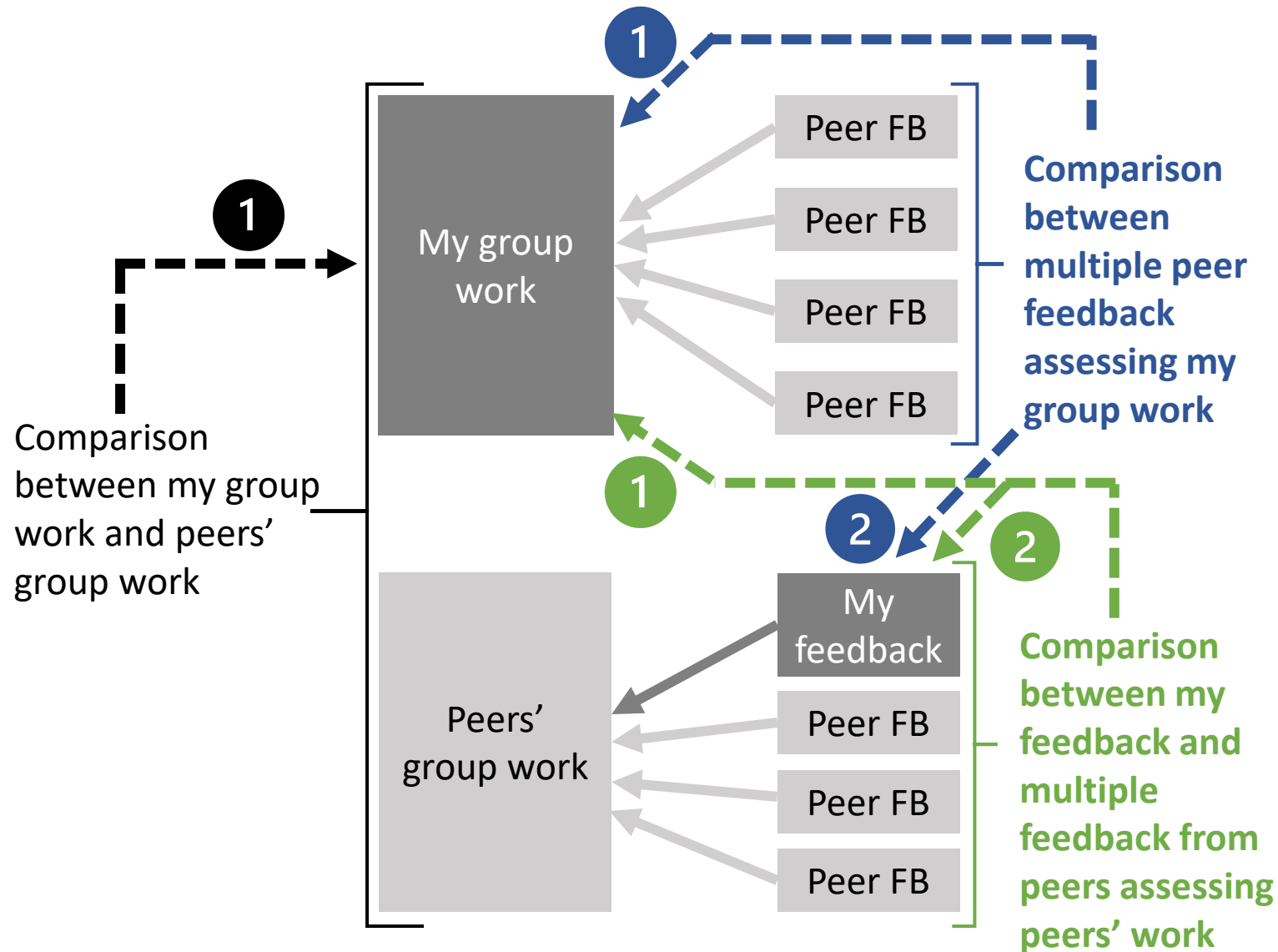


2022 (one year)
Original production on real pupils' French assignment

Context of our studies on peer feedback and emotions



Context of our studies on peer feedback and emotions



Mottier Lopez, Girardet & Naji, 2021

Inspired by David Nicols' work on feedback comparisons and inner feedback

- 1** Generates inner feedback about my knowledge related to the content of my own group work
- 2** Generates inner feedback about my own assessment and feedback skills

Continuous Assessment for Learning (ECPA)

2018 (one semester)

Original production
on real pupils' Maths
assignment

73 students (57
women and 16 men)

2- Peer feedbacks (x3) on
original production
*Remotely
Individually*

Compare peer feedbacks (x9-10) and
anticipate regulation of production
*Remotely
Individually*

5- Critical and reflexive
assignment
*Remotely
Individually*

4- Conceptual
assignment
*Face-to-face
Individually*

Question 1

You wrote 3 feedbacks to peers on their production.
What have you gained from writing peer feedback?
What were your difficulties for writing peer feedback?

Question 2

You received 9-10 feedback from peers to regulate your original
production. What have you gained from these feedback? What were
the limits of these feedback?

Revision of original production

*Face
to face
Groups of 3*

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Data analysis

- Coding of “affect-carrying words” according to existing lists of feelings (Faure, 2011; Levert, 2015)
- Separately for feedback production and feedback reception
- Coding of the association between the words and the elements associated with them :
 - Antecedents of feelings (what generated the feeling?)
 - Objects of feelings (what is the feeling about?)
 - Consequences of feelings (what has the feeling produced?)
 - Timing of feelings (did the feeling happen before, during, of after the task?)
- Counting the occurrences of each “affect-carrying words” and each associated elements.

Data analysis

Example of result table (in French) : appreciation

| PRODUCTION DE FEEDBACKS | | RÉCEPTION DE FEEDBACKS | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mots porteurs de sentiments | Éléments associés aux sentiments | Mots porteurs de sentiments | Éléments associés aux sentiments |
| Sentiments d'appréciation (37) | | Sentiments d'appréciation (31) | |
| + c'est enrichissant (17) intéressé-e ; c'est intéressant (12) apprécier (5) c'est plaisant (1) + c'est salvateur (1) + aimer (1) | <ul style="list-style-type: none"> - Prendre connaissance des TP1 des autres groupes (13) - Prendre une posture d'évaluateur-riche (6) - Permettre une réflexion sur son propre travail (6) - Prise de conscience de la difficulté de produire un feedback (4) - Favoriser l'apprentissage des contenus (3) - Le challenge de s'impliquer dans une activité difficile (3) - Prise de conscience de la diversité des propositions possibles pour une même tâche (2) - Le fait de devoir se décentrer, prendre du recul (2) - Non spécifié (6) | intéressé-e ; c'est intéressant (13) + c'est enrichissant (9) apprécier (3) c'est agréable (1) + c'est gratifiant (1) c'est plaisant (1) + c'est salvateur (1) sentiment de satisfaction (1) | <ul style="list-style-type: none"> - Permettre l'amélioration de sa production (11) - Voir la diversité des feedbacks sur une même production (9) - Avoir un avis extérieur sur sa production (8) - Recevoir des retours positifs sur sa production (4) - Prendre conscience de ses erreurs (3) - Permettre de mieux comprendre les concepts (2) - Prendre connaissance des TP1 des autres groupes au travers des feedbacks reçus (1) - Réfléchir à son propre feedback (1) |

... 7 pages of tables like this

Results

Peer feedback and emotions

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| | Feelings | FB Production | FB Reception |
|--------------------------------|--------------------------------------------------------------------------|---------------|--------------|
| Positive feelings | Appreciation (I like, it's pleasant, interesting, satisfying ...) | 37 | 31 |
| | Confidence (reassured, competent, comforted, safe ...) | 12 | 24 |
| | Involvement (engaged, responsible, self-demanding ...) | 9 | 1 |
| | Motivation (motivated, stimulated, encouraged ...) | 3 | 11 |
| | Praise (feeling valued, praised ...) | 2 | 8 |
| Deactivating negative feelings | Heaviness (heavy, redundant, consequent ...) | 9 | |
| | Hurt (I felt hurt, diminished, betrayed ...) | | 7 |
| | Difficulty (difficult, hard, complex, not easy ...) | 142 | 36 |
| Activating negative feelings | Doubt (doubtful, hesitant, uncertain, skeptical ...) | 52 | 23 |
| | Destabilization (confused, unsettled, shaken, lost ...) | 16 | 25 |
| | Anxiety (anxious, scared, worried, stressed ...) | 25 | 10 |
| | Constraint (coerced, pressured ...) | 12 | 3 |
| | Hindrance (restrained, stuck, hindered by an obstacle ...) | 8 | 6 |

Results

Feelings emerging from feedback production

FEELINGS ASSOCIATED WITH THE OVERALL TASK

Being in the shoes of a student whose work is assessed

Constraint, anxiety

Being in the shoes of an assessor

Appreciation, feeling valued, useful, involved, motivated, responsible

Difficulty, lack of legitimacy, heaviness, hindrance, anxiety

Mastering the contents, understand the concepts

Confidence, difficulty, insecurity, destabilization, doubt, hindrance, constraint

I felt vulnerable because my work was going to be assessed by the teacher and teacher assistant, experts of the field.

Being an assessor for the first time was enriching and made me realize the heaviness of responsibility coming with this role.

It was complex to be in this position, because as students we are all at the same level so we don't feel legitimate to assess peers' work.

To feel good while producing my feedbacks, I had to be sure I did understand the course concepts and contents myself. This brought me a better mastering of the contents. Once I was sure about the theory, then I could write my feedbacks.

Girardet, 2021

Feelings emerging from feedback production

Girardet, 2021

Reading peers' work is interesting and useful, as it allows us to acknowledge the diversity of propositions about the same topic.

It is horribly disabling to ask oneself constantly if we go too far, if we're too synthetic, if we don't ask enough.

Finding the right words, the right arguments, the right message to write in the comments (positive and negative) without being judgmental is very, very difficult.

FEELINGS ASSOCIATED WITH THE ASSESSMENT PROCESS

→ **Read peers' productions**

Appreciation, destabilization

→ **Understand and interpret peers' work**

Difficulty, constraint, doubt

→ **Assess peers' work (evaluative judgement)**

Refer to assessment criteria and distance oneself from own work

Appreciation, difficulty, anxiety

Assess relevance of propositions and accuracy of contents

Difficulty, destabilization, doubt

Take evaluative decisions

Affirmation, difficulty, anxiety

→ **Communicate assessment**

Doubt, destabilization, difficulty, constraint, regret, anxiety, hindrance

Feelings emerging from feedback production

Girardet, 2021

FEELINGS ASSOCIATED WITH THE OVERALL TASK

Being in the shoes of a student whose work is assessed

Constraint, anxiety

Being in the shoes of an assessor

Appreciation, feeling valued, useful, involved, motivated, responsible.

Difficulty, lack of legitimacy, heaviness, hindrance, anxiety

Mastering the contents, understand the concepts

Confidence, difficulty, insecurity, destabilization, doubt, hindrance,

FEELINGS ASSOCIATED WITH THE ASSESSMENT PROCESS

→ ***Read peers' productions***

Appreciation, destabilization

→ ***Understand and interpret peers' work***

Difficulty, constraint, doubt

→ ***Assess peers' work (evaluative judgement)***

Refer to assessment criteria and distance oneself from own work

Appreciation, difficulty, anxiety

Assess relevance of propositions and accuracy of contents

Difficulty, destabilization, doubt

Take evaluative decisions

Affirmation, difficulty, anxiety

→ ***Communicate assessment***

FEELINGS EMERGING AFTER THE TASK

Feeling valued, pride, self-efficacy, expertise, dissatisfaction, uncertainty, regret, frustration

Feelings emerging from feedback reception

Girardet, 2021

FEELINGS ASSOCIATED WITH THE OVERALL TASK

Being assessed by peers
Difficulty, doubt, destabilization, anxiety, hindrance, affirmation

Mastering the contents, understand the concepts
Appreciation, confidence, motivation, doubt, destabilization, constraint, hindrance

When reading the feedback, I couldn't know for sure that what the student said was accurate. Contrarily to a teacher's feedback, one cannot consider a student's feedback as "the absolute truth".

With teachers' feedback, I just do what they say without thinking. With peer feedback, I could argue when I didn't agree.

Reading the feedbacks confirmed that my understanding of the concepts wasn't inaccurate.

With positive comments, my motivation to keep working and understanding the concepts increased.

Working with peer feedback allows us to question our work and is thus useful to understand the concepts.

Feelings emerging from feedback reception

Realizing the variety of feedback coming from a single production was very interesting.

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Receiving positive comments helps with the feeling of safety towards our understanding of the concepts

FEELINGS ASSOCIATED WITH THE ASSESSMENT PROCESS

→ **Read peers' feedbacks**

Receive positive comments

Appreciation, confidence, motivation, feeling valued

Receive negative comments

Difficulty, hurt, dissatisfaction, demotivation, frustration, disappointment, constraint, doubt, destabilization, anxiety, appreciation, involvement

→ **Understand and interpret peers' feedbacks**

Difficulty, constraint, regret, destabilization, doubt

→ **Sort out peer's comments**

Appreciation, difficulty, doubt, destabilization, constraint, anxiety

→ **Use feedbacks to regulate one's production**

Difficulty, constraint, anxiety, confidence, valued, regret, frustration

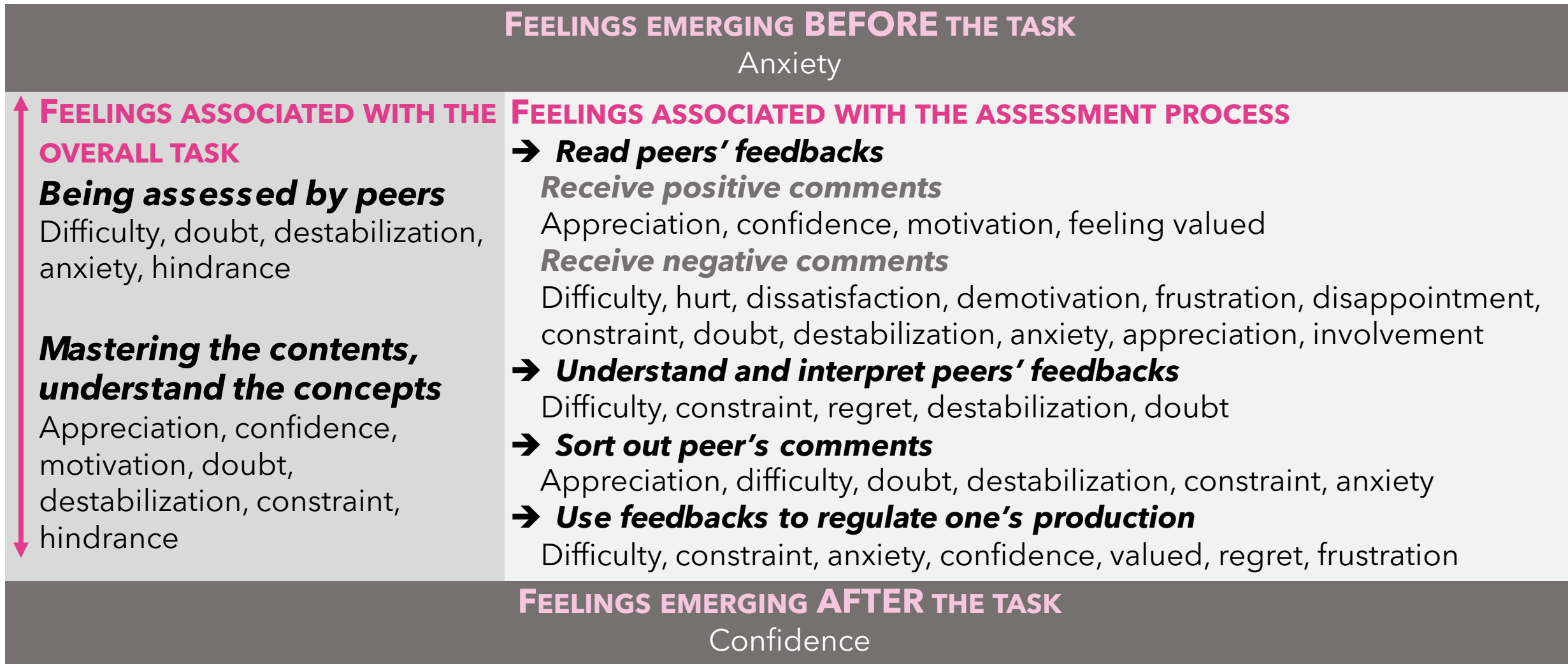
One feedback questioned our whole work and only had negative comments. It did not push me to regulate my work, it repulsed me. I didn't analyze this feedback deeply enough and might have missed relevant comments.

We received so many feedbacks that it resulted in contradictory comments. I didn't know which feedback to follow.

Receiving contradictors feedbacks raised some questions, and to answer them, we had to go back to the course material to assess the validity of the multiple feedbacks.

Feelings emerging from feedback reception

Girardet, 2021



The role of emotions in the regulation of learning

Girardet, 2021

Positive emotions

Seem to favor motivation and implication in the tasks

Deactivating negative emotions

Seem to discourage motivation and implication in the tasks

Activating negative emotions

Seem to represent a trigger for deep content learning

The role of emotions in the regulation of learning

Girardet, 2021

Activating negative emotions

- **Feedback production:** anxiety, doubt and destabilization created a need (felt also as a constraint) to go back to the course material to “solve” the emotional discomfort produced by lack of expertise.
- **Feedback reception:** doubt and destabilization pushed students to check the accuracy of peers’ comments, pushing them to go back to the course material to “solve” which comments to follow.

These mechanisms resulted in a better understanding of the concepts, according to the students.

The importance of feelings and emotions in peer feedback

Positive emotions

Seem to:

- Increase time on task and efforts (Molloy et al., 2013)
- Increase interest, motivation and involvement (Girardet, 2021; Rowe et al., 2014)
- Decrease negative emotions (Fredrickson & Cohn, 2008)
- Increase academic performance (Audrin, 2020; Fredrickson & Cohn, 2008; Girardet, 2020).

The importance of feelings and emotions in peer feedback

Deactivating negative emotions

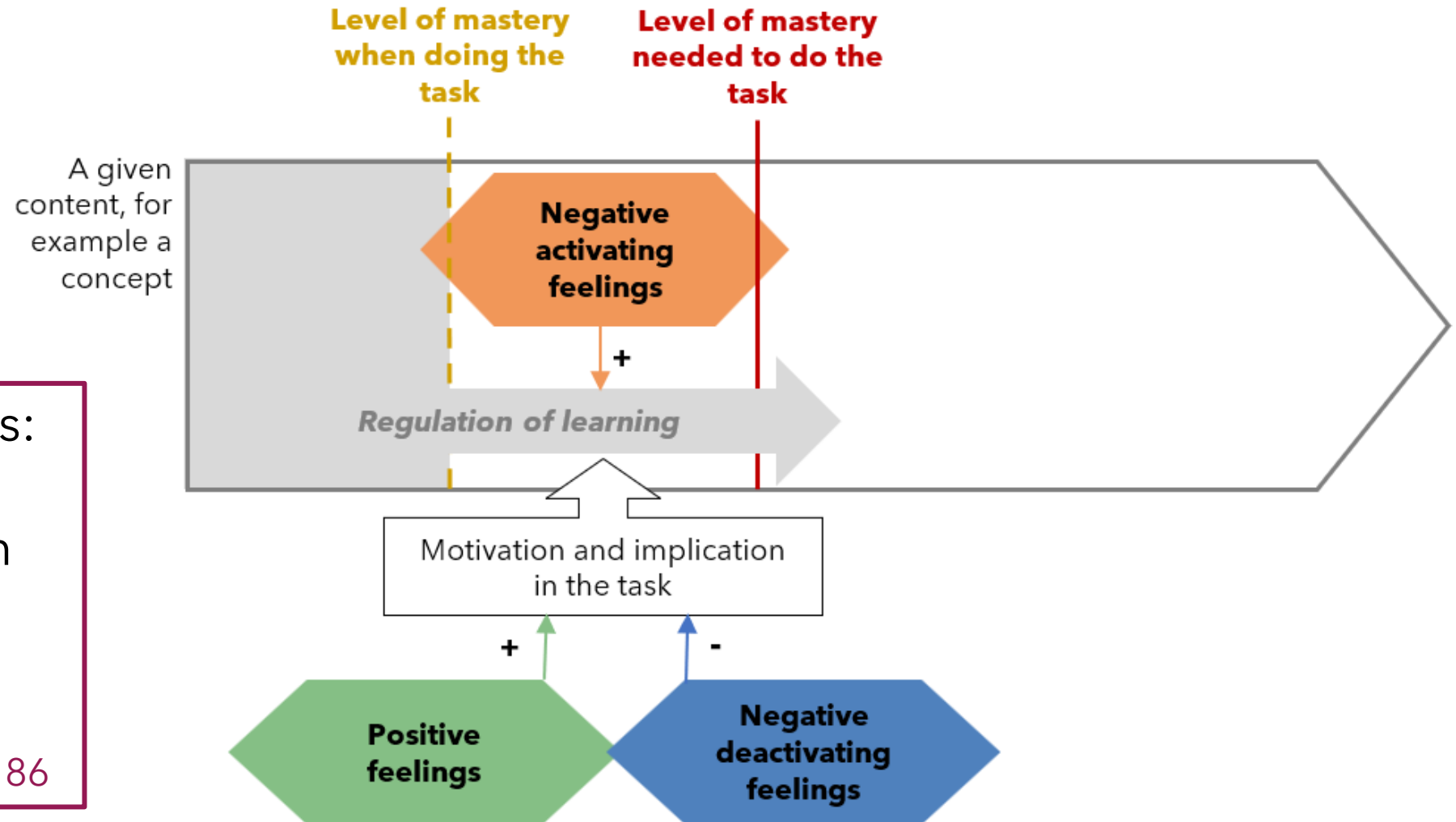
- Harmful for motivation and involvement (e.g., Audrin, 2020, Girardet, 2021; Molinari et al., 2017; Pekrun, 2006).
- Emotions stemming from assessor's judgement can have a dramatic effect on learning (Falchikov & Boud, 2007), particularly with students with low self-efficacy (Eva et al., 2012).

The importance of feelings and emotions in peer feedback

Activating negative emotions

- Increase extrinsic motivation for the task (Audrin, 2020).
- Create a need to reduce the gap between current level and needed level of mastery to accomplish the task (Girardet, 2021).
- Emotional discomfort can have positive effects on learning (Gabriel & Griffith, 2002; Girardet, 2021; Molloy et al., 2013).

The role of emotions in the regulation of learning : a model



“How feedback works:
Reducing the
discrepancy between
current and desired
understanding”

Hattie & Timperley, 2007, p. 86

Feedback literacy matters!

Peer feedback is a way to develop students feedback literacy:

- To be better equipped for their studies and the feedback they are going to have to process.
- To be able to give constructive feedback to peers.
- To train to become teachers who are going to work with feedback constantly.

→ **It is crucial to include the study of emotions in the development of feedback literacy**



Thank you for your attention

Any questions?

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